EXECUTIVE SUMMARY

Date Original Summary Prepared: April 30, 1996
Revision (expansion): September 28, 2003

Mine Name: Nielson Sandstone Mine	**I.D. Number:M/023/012**
Operator: Ash Grove Cement	**Date Original Notice Received: 5/20/1987**
Address: P.O. Box 51 P.O. Box 51 Nephi, Utah 84648	**County:** Juab County
	New/Existing: Revision to existing LMO **(Expansion)**
	Mineral Ownership: BLM , SITLA
Telephone: 435-857-1212	**Surface Ownership:** BLM , SITLA
Contact Person: Duane Crutchfield	**Lease No.(s):** UTU-070687
Telephone: 435-857-1212	**Permit Term**: Life of Mine

Life of Mine: Based on average mining production of 100,000 tons per year, and based on the projected area of mining, the mine has a life of over 50 years.

Legal Description: SW1/4 of SW1/4 of Section 1, E½ Section 11, and the NW1/4 of NW1/4 of Section 12, T14S, R3W, SLBM, Juab County, Utah

Mineral(s) to be Mined: Silica from a sandstone deposit

Acres to be Disturbed: Pit 1 – 32.4 acres, Pit 2 – 92.7 acres, Access Roads – 7.0 acres, Total acreage =132.1 acres

Present Land Use: wildlife and grazing

Postmining Land Use: wildlife and grazing

Variances from Reclamation Standards (Rule R647) Granted: The Division granted a variance to rule R647-4-111.6 Slopes. This variance applies to a portion of Pit #2 allowing the operator to create a 2H:1V slope on the north and northwest edges of the pit. The regraded slope will be monitored by the operator so that excessive erosion does not occur.

Soils and Geology

Soil Description: Nearly all of the area proposed to be disturbed has Borvant cobbly loam soils. This soil has a surface layer about 10 inches thick and a cemented hardpan at a depth of 10 to 20 inches. Portions of the site have thinner soils with rock outcropping in some areas.

pH: 8.3

Special Handling Problems: Moderate erosion hazard

Geology Description: The Sandstone beds that are mined are part of the Permian Oquirrh Formation. This formation consists of the fine to medium grained, pale reddish brown calcareous sandstone.

Hydrology

Ground Water Description: There are no known wells or springs (spring and seep survey performed in 2001) in the area. The lowest point in any proposed pit is 370 feet above the level of the Sevier River located approximately 2.5 miles to the southeast of the mine site.

Surface Water Description: Surface drainages in the immediate area are ephemeral in nature and only flow in direct response to precipitation events.

Water Monitoring Plan: No water monitoring is required.

Ecology

Vegetation Type(s); Dominant Species: Sagebrush, juniper, bluebunch wheatgrass, and Sandberg bluegrass.

Percent Surrounding Vegetative Cover: 12 percent

Wildlife Concerns: No significant concerns identified.

Surface Facilities: No permanent facilities will exist on site.

Mining and Reclamation Plan Summary:

During Operations: The Nielson Sandstone mine began operation in 1987. Since opening, the mine has operated as a conventional open pit mine. Typically, the mine was operated as a single bench pit where the mineral deposit was excavated on one level. This was done by drilling and blasting the mineral deposit, which was then excavated and placed in piles for temporary storage.

The expansion of the existing pit will be conducted also using a single bench approach. As a new area of the pit is to be disturbed, soils in the area will be stripped. Then, the total bench height for the area will be completely mined by drilling and blasting the rock and removing the mineral. When the limits of the pit are reached, the pit will be graded and reclamation will commence.

Pit 2 will be mined as a repeated single bench operation starting at the top of the ridge. For each level of the mine, a flat floor will be constructed until the floor reaches an elevation of 5320 feet. For the final level, the floor on the western portion of the pit will be sloped upward to allow the pit to conform with the adjacent topography. On all other levels, the pit will be mined to daylight on all but the northwest edge. On this portion of the pit, a 2H:1V pit slope will be constructed to blend to the existing topography on the ridge. It is envisioned that mining of a single level will be completed before the next level would be developed.

After Operations: Following the completion of mining operations in each phase, the mine phase will be contemporaneously reclaimed to meet the post-mining land use. At the completion of all mining, the site will blend into the surrounding topography. The mine slopes will be reclaimed at a 3H:1V slope. Access to the top of the highwall will be by the two-track road along the soil windrow on the west side of the pit. This area will be drilled on a pattern to achieve a 3H:1V slope and blasted to reduce the existing highwall slopes. At the conclusion of mining, the final slope grading will be achieved using dozers to move the blasted materials to the final configuration.

For both pits, the pit bottom will be sub-drilled to a minimum of three feet as part of the development of the final level of the mine; therefore, the broken materials will function as the sub-soil layer in the reclamation. The pit areas will be ripped and recontoured to the final configuration. Then the previously stripped soil will be redistributed on these areas.

The small ephemeral drainages that were affected by the pit excavation and access road development will be reestablished as part of the final reclamation configurations.

All roads within the pit areas will be reclaimed following mining. Some roadways (two track roads) in the mine area will remain following mining to access the BLM grazing lands north of the mine. Efforts will be made to ensure that the remaining roads to remain will not be routed directly through the reclaimed portions of the site. Access to the reclaimed site will be over these roads allowing for periodic inspection of the site.

The all-weather access roads will be reclaimed by removal of the asphalt surface, recontouring cut and fill sections to blend into surrounding topography and seeded for revegetation. The removed asphalt will be hauled to an appropriate off-site landfill.

The unimproved roads (two track roads) where soils have not been stripped, will be reclaimed by ripping the road surface to improve prospects of seeding success, minimal recontouring to blend into the surrounding topography, and seeding with the approved seedmix (see attached).

The mined area will be graded to approximate final contours, and then ripped to relieve compaction. Ripping will be completed to a maximum depth of two feet. Final ripping depths will be determined by the materials being ripped, to prevent incorporation of less desirable soil/rock into more production materials.

Following ripping, stockpiled soil will be applied to the ripped surface and left in a roughened state. Hay and/or straw mulch or other suitable substitute with a high organic matter content will be incorporated into the soil media at a rate of two tons per acre. All seeding will take place during the fall of the year that reclamation is performed.

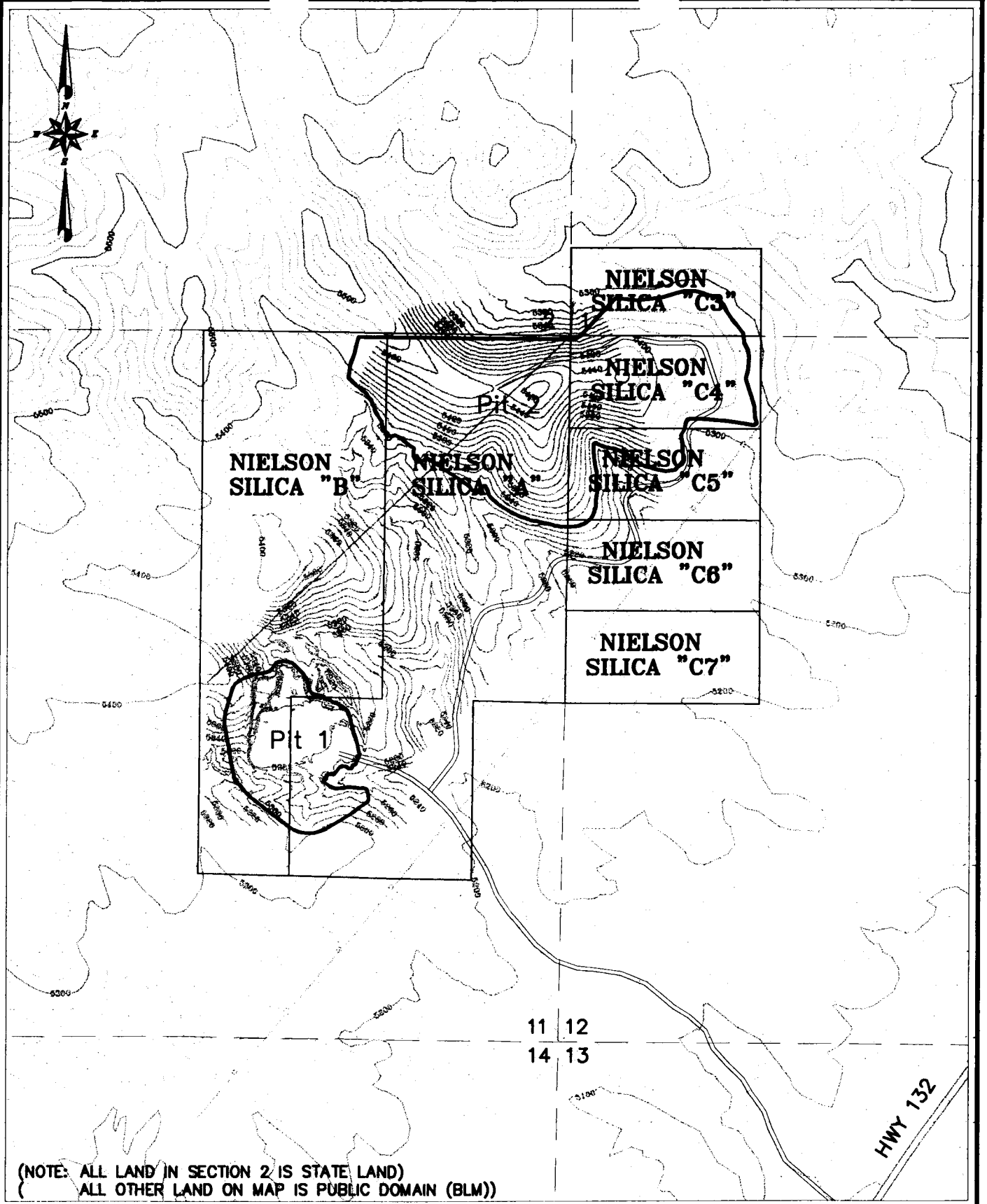
Surety
Amount: $535,627
Form: to be determined
Renewable Term: 2008 dollars

jb
O:\M023-Juab\M0230012-NielsonSSQuarry\Final\exec summ-9222003.doc

TABLE 110-1

SEED MIX AND APPLICATION RATES

RECLAMATION MIXTURE	
Seed Type	Application Rate (lbs of pure live seed/acre)
Crested Wheatgrass - Hycrest	3.0
Bluebunch Wheatgrass - Goldar	2.5
Pubescent Wheatgrass - Luna	2.0
Russian Wildrye - Bozoisky	2.0
Western Wheatgrass - Aribba	1.0
Bottlebrush Squirreltail	1.0
Sandbergs Bluegrass	1.0
Four Wing Saltbush	1.0
Antelope Bitterbrush	1.0
Total	14.5



LOCATION: T 14S, R 3W, SLBM

0' 1000'

MAP 104-1. MINING CLAIMS LOCATION MAP

EarthFax